

Year 1

Research

- Scalability analysis of the MDS4 index service, and improvements as needed to meet application requirements
- Scalability analysis of the MDS4 archive service, and improvements as needed to meet application requirements
- Prediction service work to begin

Development

- Interfacing to Inca sensors
 - Initial definition and development of a standard template to interface with externally created sensors (Inca sensors only in first year), to create WSRF-compliant resource property providers as part of the NMI Sensor Toolkit
 - Development of the Inca sensors listed in Table 1, for initial performance data collection. (Note: Inca sensors now also include those for GRASP)
 - Standard schema definitions as needed for first year performance data based on existing standard approaches
 - Visualization tool to view basic Inca performance data
- Extending resource properties in Globus
 - Extend basic resource property information from Globus GRAM and Globus RFT/GridFTP services
 - Client tools for visualizing GRAM and RFT/GridFTP services
- Trigger service
 - Development of WS-RF compliant trigger service with pre-defined thresholds and simple actions like "send mail"
- Stability analysis and hardening of basic MDS4 infrastructure and developed additions from this project as needed

Outreach

- Attend group meetings for relevant NMI application groups
- Release initial NMI Sensor Toolkit
- Include updated sensors in relevant Globus Toolkit and NMI releases

Year 2

Research

- Prediction service prototype

Development

- Interfacing to performance benchmarks
 - Initial definition and development of a standard template to interface with externally created sensors (Benchmark and performance data in second year), to create WSRF-compliant resource property providers as part of the NMI Sensor Toolkit
 - Standard schema definitions for performance data based on existing standard approaches
 - Extensions of initial sensor set to interface with benchmark performance data (Rest of Table 1) and 2-3 additional NMI software components or services
 - Visualization tool to view basic BM/NMI service performance data

- Interfacing to existing performance monitoring archives
 - Development of WSRF-compliant sensors to access other common data archives, such as NWS, NetLogger, PingER, and Inca, using the NMI Sensor Toolkit
 - Visualization tool to view basic data archive performance data
- Trigger service
 - Development of the trigger service with pre-defined thresholds with more complex actions such as starting a new sensor
- Better usability for the sys admin- Configuration management
 - Prototype of sensor configuration and management tool to enable easy deployment, reconfiguration, and incorporation of sensors across a Grid environment
- Better usability for the user
 - Prototype of personal performance visualization tool

Outreach

- Attend group meetings for relevant NMI application groups
- Display proof of concept at SC, and evaluate feedback
- Include updated sensors in relevant Globus Toolkit and NMI releases